

# An empowerment approach to insulin pump training

Jill Rodgers

## Introduction

Insulin pumps are self-management tools for people with diabetes, and may be considered as one of the most empowering aspects of diabetes care. However, using an insulin pump involves learning technical skills and how to deal with day-to-day activities in different ways. This article looks at the benefits of insulin pump therapy when it is actively managed by the person with diabetes, and how an empowerment approach can help with initial discussions about pumps. It also discusses how empowerment should be integrated into both initial teaching and also follow-up support of people using insulin pumps.

Insulin pumps have been approved by NICE for people with type 1 diabetes using multiple injection therapy, who are still unable to achieve an HbA<sub>1c</sub> lower than 7.5% without disabling hypoglycaemia (NICE, 2003). Although many diabetes centres have yet to initiate pump therapy, their use has steadily increased since 1998 (Everett, 2003). Insulin pumps provide the advantage of greater flexibility of lifestyle for people with diabetes because they allow close titration of insulin doses to meet changing requirements throughout the day. Also, and perhaps most importantly, changes in insulin doses provide predictable responses to a much greater degree than any current multiple injection regimen (Wilson, 2003; Bode et al, 1996). However, many of the advantages of this system will be lost if the person wearing the pump does not actively manage their blood glucose levels on a day-to-day basis. *Figure 1* shows an example of a pump.



Figure 1. An insulin pump

## EXAMPLES OF PRACTICAL SKILLS NEEDED FOR INSULIN PUMP THERAPY

- Putting the equipment together
- Priming the infusion set
- Inserting the infusion set into the skin
- Programming basal insulin delivery rates
- Giving boluses for meals
- Using variable insulin delivery rates in different situations
- Understanding and acting on alarm codes
- Calculating amounts of insulin required
- Action to take to correct hypoglycaemia
- Action to take to correct hyperglycaemia

Figure 2. Examples of practical skills needed for insulin pump therapy

## Insulin pump training

Being trained to use an insulin pump requires the acquisition of a number of practical skills (see *Figure 2*). People with diabetes have to take in new information and learn how to manage their diabetes in a different way, i.e. change their insulin dose in response to carbohydrate intake

and current blood glucose readings. Pump users must also learn when to adjust their basal rate, how to deal with hypoglycaemia and hyperglycaemia promptly, and how to adjust insulin in

## ARTICLE POINTS

- 1 Insulin pumps provide people with diabetes with greater potential to control their blood glucose levels.
- 2 An empowerment approach acknowledges that people with diabetes are responsible for their own health and their diabetes self-care.
- 3 People with diabetes should be encouraged to reflect on previous experiences to identify how to deal with new situations.
- 4 Encouraging active decision making when people first start using an insulin pump helps them develop long-term skills.
- 5 We need to acknowledge that empowerment requires a different approach that we may not be trained for.

## KEY WORDS

- Self-management
- Insulin pump therapy
- Empowerment
- Diabetes

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**PAGE POINTS**

**1** People with diabetes have a responsibility, for their health and for the way they look after their diabetes.

**2** Healthcare professionals should not provide information on the basis of what they think patients need to know, instead, the aim is to help the patient explore whether pump therapy is likely to help them, in light of their glycaemic control and their lifestyle.

**3** People with diabetes should not think that they can forget about their diabetes because ‘the pump will sort it out’, but instead they should be helped to realise that frequent blood glucose testing, insulin adjustment and careful consideration of difficult situations will be part of their everyday lives.

response to specific situations, such as illness and exercise. Many people with diabetes are already doing much of this, but may need to learn new ways of managing these situations when using an insulin pump – for example, they may find that hypoglycaemia can be corrected with much smaller amounts of carbohydrate when they are using rapid acting analogues alone in pump therapy. For many people, it can feel like starting afresh and looking at their diabetes from a new angle.

**Adopting an empowerment approach**

So where does an empowerment approach fit in? To many people, empowerment suggests that we ‘hand over responsibility’ to the person with diabetes and then live with the positive or negative consequences that their actions will bring. But this is an inaccurate portrayal of the concept of empowerment. We need to understand that the person with diabetes already has that responsibility, for their health and for the way they look after their diabetes. On that basis, the consequences of how much self-care a person is prepared to undertake rests solely with them (Anderson and Funnell, 2000).

Using an empowerment approach helps people understand the choices available to them and facilitates their health-related decisions (Arundel et al, 2003). Insulin pump therapy fits with this model; many people using insulin pumps make the initial enquiry themselves, rather than a pump being suggested by a health professional. This provides evidence that people living with diabetes every day of their lives have thoughts and opinions as to how their diabetes should be managed.

**Areas for discussion in the empowerment approach**

Healthcare professionals who use the empowerment approach to deal with an enquiry about pump therapy should not provide information on the basis of what

**QUESTIONS TO ASK POTENTIAL PUMP USER**

- Tell me what you know about insulin pump therapy?
- How do you manage your diabetes at the moment?
- How do you think an insulin pump would help you manage your diabetes better?
- Describe how you think you will practically manage your pump on a day-to-day basis?

*Figure 3. Questions to ask someone to determine whether they might benefit from using an insulin pump*

they think the person needs to know, nor a personal opinion on whether pump therapy will benefit them. Instead, the aim is to help the person with diabetes explore whether pump therapy is likely to help them, in light of their glycaemic control and their lifestyle.

Key areas to discuss include what the person’s expectations are of using an insulin pump, their understanding and current management of their insulin regimen, and their willingness to play an active role in making day-to-day decisions about their glycaemic control. Suggestions of questions that can be used are shown in *Figure 3*. At this point, the person may not know enough about pumps to be able to answer all the questions, and information may need to be provided. It is crucial at this point that the person with diabetes does not hold the misconception that they can forget about their diabetes because ‘the pump will sort it out’, but instead they should be helped to realise that frequent blood glucose testing, insulin adjustment and careful consideration of difficult situations will be part of their everyday lives. Many people with diabetes are already taking a very proactive role in managing their diabetes, so this concept will not be new, but for others it may be a challenge that they do not wish to take on.

**Initiating pump therapy**

As identified earlier, use of an empowerment approach means facilitating the person with diabetes to use their pump. Learning involves people adapting what they already know and increasing their understanding and ways of coping, rather than purely acquiring new knowledge (Anderson et al, 2000). Therefore, knowledge should be introduced in light of a person's previous experience to increase their understanding and their ability to manage their insulin pump. There are a number of principles that will help to ensure pump training is centred on the person's 'need to learn' rather than the health professionals 'need to have taught':

1. The insulin pump should always be in the hands of the person with diabetes, not the healthcare professional (although the healthcare professional may wish to use a demonstration pump as well).
2. The person with diabetes should set the pump up and input all their parameters and insulin doses.
3. Information on how to use the pump should be based on the principles of how it delivers insulin and how to give differing amounts of insulin according to different circumstances, rather than specific instructions.
4. The healthcare professional should provide information in an objective way and encourage the person with diabetes to decide how they will use the pump in practice.

An example of how a healthcare professional can encourage someone using a pump to identify what action they may take to deal with specific circumstances is shown in *Figure 4*. Using an empowerment approach, the health professional does not make suggestions, but instead encourages the person with diabetes to reflect on their existing experience and identify how they can use their insulin pump to achieve the blood glucose levels they want. Also, it is important to acknowledge that dealing with different activities or foods are experimental in the early days of living with a pump, and each person will

**DEALING WITH SPECIFIC CIRCUMSTANCES**

*PWD: What should I do with my insulin dose when I drink alcohol?*

*HP: Tell me how you would normally adjust your insulin when you drink alcohol?*

*PWD: Well, if I have more than three glasses of wine I make sure I have something extra to eat before I go to bed. If I drink a lot, I also sometimes reduce my night time long acting insulin, otherwise I might be low the next day.*

*HP: And what effect do those changes have on your blood glucose level?*

*PWD: Eating stops me from having a hypo in the night, and reducing my insulin gives me normal readings the next day.*

*HP: So having already learnt how the pump gives you insulin, what could you do to have the same effect?*

*PWD: I could have my snack as usual, but without giving a bolus, then set my pump to put in a reduced amount of insulin overnight.*

*HP: Do you think you will still need to eat before bed, or would you prefer to try and manage it solely by adjusting your insulin?*

*PWD: I suppose I could just lower my dose, but I do like to eat when I've been out for a drink.*

*HP: You've already identified that you need less insulin and how you can manage that, and you can decide whether you want to snack or not. It sounds like the next step is to try your ideas out and see what effect they have on your blood glucose level.*

*Figure 4. Dealing with specific circumstances. (PWD = person with diabetes, HP = health professional)*

gradually work out what works best for them.

**Ongoing support**

Many people using insulin pump therapy find it helpful to liaise closely with healthcare professionals in the early days of using an insulin pump. At this time, an empowerment approach will help pump users develop their skills and judgment in dealing with different situations. Rather than suggesting what changes need to be made, asking questions such as the following will help guide the person with diabetes to making decisions about their insulin needs.

**PAGE POINTS**

**1** The person with diabetes should set the pump up and input all their parameters and insulin doses.

**2** The healthcare professional should provide information in an objective way and encourage the person with diabetes to decide how they will use the pump in practice.

**PAGE POINTS**

**1** We are trained as nurses to approach patient care using a traditional model, providing advice and suggestions as to how people should deal with different situations.

**2** Using a different approach can mean learning new skills and leaving behind some of the ways of working that we learnt as student nurses, which are reinforced in an acute care situation.

- ‘Which blood glucose readings are you happy with and which would you like to change?’
- ‘What do you think caused the readings you are not happy with?’
- ‘So do you think you need more or less insulin at that point?’
- ‘How could you adjust your dose to bring those blood glucose readings into the range you’re aiming for?’

Active decision making in the early stages of using a pump will help people develop skills in insulin adjustment that they can use long-term, whereas being told what changes to make will only increase dependency.

**Conclusion**

This article has described various techniques that can be adopted, and questions that can be asked, to facilitate greater self-management and active decision making when people with diabetes start to use insulin pump therapy. We are trained as nurses to approach patient care using a traditional model, providing advice and suggestions as to how people should deal with different situations. Using a different approach can mean learning new skills and leaving behind some of the ways of working that we learnt as student nurses, which are reinforced in an acute care situation. We spend much of our time trying to help people with diabetes change their behaviour to improve their health, and we see how difficult they find it. We are no different, and if we decide to adopt a new approach we should understand that it will be difficult, and it may take time to feel comfortable with a new way of working. ■

*Jill Rodgers works in partnership with Rosie Walker as ‘In Balance Healthcare UK’ – for more information on their skills development workshops for 2004, including empowerment and consultation skills, visit their website at [www.ibhuk.com](http://www.ibhuk.com)*

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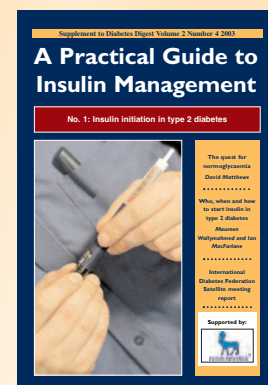
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